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Underwriters Laboratories approval

SINAMICS G110M



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Table of content

1	SINAMICS G110M Underwriters Laboratories approval	3
2	Conditions of acceptability.....	4
2.1	Mounting requirements.....	4
2.2	Temperature.....	4
2.3	Han Q power connectors.....	4
2.4	Supply cable.....	4
2.5	Supply systems.....	4
2.6	24V DC supply.....	5
2.7	UL motor overload protection.....	5
2.8	Surge/transient protection devices (SPD).....	5
2.9	Integral short circuit protection.....	5
2.10	Branch circuit protection.....	6
2.11	NFPA compatibility.....	6
2.12	Options.....	6

1 **SINAMICS G110M Underwriters Laboratories approval**

SINAMICS G110M is Underwriters Laboratories (UL) Recognised Power Conversion Equipment, displaying the following marking:

Figure 1-1



The UL file number for this product is E1201068, Volume 1 Section 8.

<http://database.ul.com/cgi-bin/XYV/cgifind/LISEXT/1FRAME/index.html>

The SINAMICS G110M is not UL Listed because the product requires the customer to provide a cooling medium and complete the enclosure e.g. mounting on a suitable motor. The customer must consider the following COA (conditions of acceptability) when using the SINAMICS G110M when it is mounted directly onto a motor, or when it is fitted to the Wall Mounting Kit.

2 Conditions of acceptability

2.1 Mounting requirements

When mounted on the SINAMICS G110M Wall Mounting Kit 6SL3566-1GA00-0GA0 any suitable motor maybe be used.

When motor mounted only Siemens motors listed in the attached FAQ have been evaluated. The acceptability of SINAMICS G110M when operated with alternate motors under normal or abnormal load must be determined for each alternate motor, ID: [109738577](#)

2.2 Temperature.

All models have been evaluated for use at ambient temperatures of up to 40°C. All models, except when used with 0.25kW 1LA7070-4ABvw-Z M64 and 0.37kW / 0.43kW 1LA7073-4ABvw-Z M64 motors have a temperature de-rating of 3% per K above 40°C to a maximum of 55°C.

CAUTION	“Hot surface” are present during operation as enclosure parts that are intended to be touch can exceed 65°C.
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2.3 Han Q power connectors.

HanQ power connectors must not be disconnected whilst under load.

2.4 Supply cable.

The supply wires shall be 75°C copper wire only. Details of required connections can be found in the installation manual.

2.5 Supply systems.

SINAMICS G110M is suitable for connection to centre-earthed wye (centre-grounded Y) supply systems only.

2.6 24V DC supply.

The SINAMICS G110M requires 24V DC for all control units. This 24 volt DC maybe supplied by fitting modules 6SL3555-0PV00-0AA0 or by external supply. When powered externally the PSU shall be 24V DC NEC Class 2 or a Limited voltage/current (LV/C) source. A limited voltage/current (LV/C) supply as defined by UL508. A LV/C supply must be Max 30Vrms, Max voltage peak 42.4V, Max current 8A, and Max power of 100VA.

A SITOP 24V DC PSU and ET200ECO Power distribution module would meet the LV/C requirements. Alternatively a Class 2 supply (SITOP PSE200U module) would be appropriate.

2.7 UL motor overload protection.

The SINAMICS G110M is capable of providing internal motor overload protection in accordance to UL508c. For operation refer to the parameter list manual.

2.8 Surge/transient protection devices (SPD)

Transient surge suppression must be installed on the line side of the SINAMICS G110M and shall be rated 480v (phase to ground), 480v (phase to phase), suitable for overvoltage category III and shall provide protection for a VPR (Voltage Protection rating) maximum of 2kV, type 1 or type 2 SPD (Surge Protection Device) applications.

Additional suppression devices are not needed when the EM brake circuit is used.

2.9 Integral short circuit protection.

Integral solid state short circuit protection does not provide branch circuit protection. Branch circuit protection must be provided in accordance with the National Electrical Code and any additional local codes.

2.10 Branch circuit protection.

Branch circuit protection of type class J or CC fuse shall be installed with ratings shown in the table below:

Table 2-1

Article number (MLFB)	Fuse rating
6SL3517-1BE11-3AM0	20A
6SL3517-1BE12-3AM0	20A
6SL3517-1BE13-3AM0	20A
6SL3517-1BE14-3AM0	20A
6SL3517-1BE16-3AM0	20A
6SL3517-1BE17-7AM0	20A
6SL3517-1BE21-0AM0	20A

Suitable for group installation on a circuit capable of delivering not more than 40kA symmetrical amperes, 480V max.

The SINAMICS G110M system has been designed to allow a converter to utilize power-through to provide the mains power for a number of converters in a daisy chain.

The maximum current limits for the daisy chain are given below:

- HanQ variants; the maximum current of the daisy chained converters must not exceed 16 A.
- Glanded variants; the maximum current on the daisy chained converters must not exceed 12 A.
- HanQ and Glanded variants; the input for the daisy chained converters can be protected by a 20 A fuse.

The user responsible for ensuring that the current limits are not exceeded.

2.11 NFPA compatibility

These devices are intended only for installation on industrial machines in accordance with the "Electrical Standard for Industrial Machinery" (NFPA79). Due to the nature of these devices they may not be suitable for installation accordance with the "National Electrical Code" (NFPA70) e.g. cannot be connected with conduit.

2.12 Options

For details of option modules and interconnecting cables please see FAQ [65355810](#) and the [Catalogue](#)